

Elastase 2, Neutrophil Active Protein | ELA2 active protein

Active Elastase 2, Neutrophil (ELA2)

CATALOG # AAA149230	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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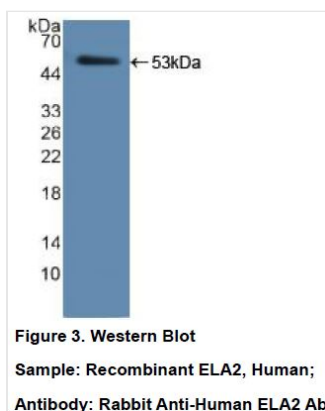
PRODUCT SYNONYMS

Elastase 2; Neutrophil; Active Elastase 2; Neutrophil (ELA2); ELANE; HLE; HNE; NE; PMN-E; Neutrophil Elastase; Medullasin; Polymorphonuclear Leukocyte Elastase; Bone Marrow Serine Protease; Human Leukocyte Elastase; PMN Elastase; ELA2 active protein

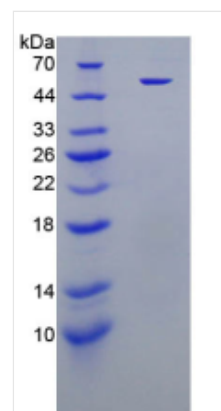
PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	> 98%
Form/Format	Freeze-dried powder
Applicable Applications for ELA2 active protein	Activity Assay, Cell Culture
Fragment	Ile30~Gln247
Tag	Two N-terminal Tags, His-tag and GST-tag
Isoelectric Point	8.7
Buffer/Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Usage	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

IMAGES

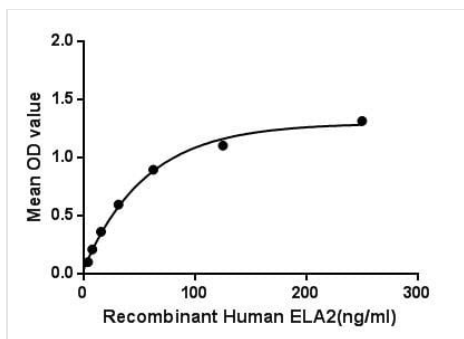


WB (Western Blot)



SDS-PAGE

Sample: Active recombinant ELA2, Human



Sequence

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I  VGGRRARPHA  WPFMVSLQLR
GGHFCGATLI  APNFVMSAAH  CVANVNVRAV  RVVLGAHNLS  RREPTRQVFA
VQRIFENGYD  PVNLLNDIVI  LQLNGSATIN  ANVQVAQLPA  QGRRRLNGVQ
CLAMGWGLLG  RNRGIASVLQ  ELNVTVTSL  CRRSNVCTLV  RGRQAGVCFG
DSGSPLVCNG  LIHGIAFVR  GGCASGLYPD  AFAPVAQFVN  WIDSIIQ

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Bioactivity

Figure 1. The binding activity of ELA2 with COL17. Elastase 2 (ELA2), elastase 2 is a serine proteinase in the same family as chymotrypsin and has broad substrate specificity. Secreted by neutrophils and macrophages during inflammation, it destroys bacteria and host tissue. The neutrophil form of elastase is 218 amino acids long, with two asparagine-linked carbohydrate chains (see glycosylation). Neutrophil elastase may play a role in degenerative and inflammatory diseases by its proteolysis of collagen-IV and elastin of the extracellular matrix. This protein degrades the outer membrane protein A (OmpA) of *E. coli* as well as the virulence factors of such bacteria as *Shigella*, *Salmonella* and *Yersinia*. Besides, Collagen Type XVII (COL17) has been identified as an interactor of ELA2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human COL17 and recombinant human ELA2. Briefly, ELA2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to COL17-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-ELA2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of ELA2 and COL17 was shown in Figure 1, and this effect was in a dose dependent manner.

ADDITIONAL INFORMATION

Product Categories/Family for ELA2 active protein

Enzyme & Kinase; Infection immunity

NCBI AND UNIPROT INFORMATION

UniProt Accession #

P08246

Molecular Weight

53kDa as determined by SDS-PAGE reducing conditions.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-ela2-active-protein/elastase-2-neutrophil/149230>